



COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS

ENVIRONMENTAL MANAGEMENT COMMISSION

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MASSACHUSETTS ENVIRONMENTAL MANAGEMENT COMMISSION

SECTION 61 FINDING

PURSUANT TO M.G.L. CHAPTER 30, SECTION 61

**PROJECT NAME:** Final Area-Wide Environmental Impact Report for Massachusetts National Guard Properties at the Massachusetts Military Reservation (MMR); and associated Notice of Project Change noticed in the Monitor on September 26, 2006

**PROJECT PROPONENT:** The Massachusetts National Guard

**PROJECT MUNICIPALITY:** Bourne, Falmouth, Mashpee, Sandwich

**PROJECT LOCATION:** Camp Edwards, MA

**PROJECT WATERSHED:** Cape Cod

**EOEA NUMBER:** 5834

The following Section 61 Findings have been prepared on behalf of the Environmental Management Commission (EMC) to comply with the requirements of Massachusetts General Laws Chapter 30, Section 61. Under M.G.L. c.30, s.61, state agencies and authorities are required to review, evaluate, and determine the impacts on the natural environment of all works, projects, or activities conducted by them and to undertake all feasible means and measures to minimize and prevent damage to the

environment. As part of any determination made, this law requires that state agencies and authorities issue a "finding" describing any impacts of the project and certifying that all feasible measures have been undertaken to either avoid or minimize these impacts.

## **I. PROJECT DESCRIPTION**

In the 2001 Final Environmental Impact Report (FEIR), the Massachusetts Army National Guard (MANG) proposed to prohibit the use of lead-bullet ammunition at Camp Edwards. When the lead bullet prohibition was originally proposed and adopted as an Environmental Performance Standard there were alternatives such as tungsten-nylon ammunition. A subsequent restriction on tungsten ammunition was imposed due to groundwater impacts from tungsten ammunition. In order to train its soldiers, the MANG requested, through a Notice of Project Change, to use lead-bullet ammunition in conjunction with appropriate small arms range best management practices. A Certificate was issued by the Secretary of Environmental Affairs on November 9, 2006. Modifications to the Environmental Performance Standards are made by the EMC in accordance with Chapter 47 of the Acts of 2002.

In a letter to the MANG dated June 23, 2007, the EMC conditionally approved the use of lead bullet ammunition at the Tango Range, subject to specific monitoring and reporting requirements and the use of a STAPP Environmental Bullet Catcher system, as discussed in more detail below. The EMC's conditional approval is valid until December 31, 2008. The Tango Range Plan was conditionally approved in accordance with an Environmental Performance Standard amended by the EMC on July 11, 2007.

## **II. PROJECT IMPACTS AND MITIGATION MEASURES**

Throughout the environmental review process, the proponent, the Massachusetts Army National Guard, has been working, and continues to work, with the EMC and the Small Arms Working Group which includes MassDEP and the EPA to assess impacts and develop measures to mitigate potential impacts from the small arms ranges.

The potential environmental impacts of training on the small arms ranges at Camp Edwards with lead ammunition have been characterized and reviewed in the soil and groundwater site investigations, the Environmental Assessment of Lead at Camp Edwards, Massachusetts Small Arms Ranges Report, the Pollution Prevention Overview (Small Arms Supplement) plan, a Tango range design, operation, maintenance, and monitoring plan, the NEPA Environmental Assessment, and other documents. These documents can be found on the Massachusetts Army National Guard web site ([www.eandrc.org](http://www.eandrc.org)). No significant impacts to environmental resources from firing lead ammunition into the bullet trap were identified.

The Massachusetts Army National Guard has recognized that the identification of effective monitoring and mitigation of potential and/or unforeseen impacts is central to its responsibilities. Monitoring and mitigation measures are included in the above noted pollution prevention plans, monitoring plans, and through the use of a bullet containment system to limit lead exposure.

There have been extensive opportunities for public involvement through the review periods, public meetings, and site visits. Comments received were incorporated, as appropriate, into the review

and applicable documents. The potential environmental impacts were also considered and mitigation incorporated into the revisions to the Environmental Performance Standards following public review. Potential environmental impacts were also considered and mitigation incorporated into the approval of the Tango range plan.

Key mitigation provisions incorporated by the EMC into the Environmental Performance Standards and the Small Arms Range Plan Approval include:

- A limited (18 month) duration of the Tango range approval that will include interim monitoring reports.
- Requirements that all firing be in accordance with the Environmental Performance Standards, which contain a new review and approval process for small arms ranges.
- The Environmental Performance Standards contain restrictions on how a range must be operated utilizing pollution prevention methods, bullet containment, an extensive monitoring plan, oversight provisions, and other best management practices.
- The Tango Range Plan shall include bullet trap to fully contain the rounds.
- A monitoring report evaluating the design, materials, and installation methods of the lysimeters on Tango range.
- A plan to utilize real time soil metals sampling devices on the range (e.g. XRF).
- A requirement to evaluate tracers should they be proposed for use on Tango range.
- A condition that informational training packets for Tango range be updated to address conditions associated with any approvals, the Range Plan, Environmental Performance Standard changes, or other relevant changes.
- A mass balance of expended rounds vs. rounds collected shall be conducted and a report of the results provided to the public.
- The Annual State of the Reservation Report shall have a section dedicated to details of the Tango range operation, maintenance, monitoring, inspections, and relevant issues encountered during the applicable period.
- In addition to the Annual State of the Reservation Report, the MANG will provide the public with an informational meeting in the fall of 2007 to provide an update on the initial operation of Tango Range. The community shall also be informed through periodic updates at the EMC's Community Advisory Council meetings, Science Advisory Council meetings, and on the MANG's Environmental & Readiness Center web site ([www.candrc.org](http://www.candrc.org)).

The Range Performance Standard added to the existing Environmental Performance Standards includes the following:

19.1. All operational ranges including but not limited to small arms ranges (SAR) shall be managed to minimize harmful impacts to the environment within the Upper Cape Water Supply Reserve. Range management at each range shall include to the maximum extent practicable metal recovery and recycling, prevention of fragmentation and ricochets, and prevention of sub-surface percolation of residue associated with the range operations. Camp Edwards shall be held responsible for the implementation of BMPs by authorized range users, including collection and removal of spent ammunition and associated debris.

19.2. Small arms ranges shall only be used in accordance with approved range plans. These plans shall be designed to minimize to the maximum extent practicable the release of metals or other contaminants to the environment outside of specifically approved containment areas/systems. Occasional ricochets that result in rounds landing outside of these containment areas is expected and every effort to minimize and correct these occurrences shall be taken. Failure to follow the approved range plans shall be considered a violation of this Environmental Performance Standard.

19.3. All operational SARs shall be closely monitored by the Massachusetts National Guard to assess compliance of the approved range plans as well as the implementation and effectiveness of the range specific BMPs.

19.4. Camp Edwards/Massachusetts National Guard Environmental and Readiness Center shall staff and request appropriate funding to support its SAR management plans.

19.5. All users must use and follow Camp Edwards' Range Control checklists and procedures to:

- Minimize debris on the range (e.g. shell casings, used targets)
- Minimize or control residues on the ranges resulting from training (e.g., unburned constituents, metal shavings from the muzzle blast)
- Ensure the range is being used for the designated purpose in accordance with all applicable plans and approvals

19.6. Camp Edwards is responsible for following range operation procedures and maintaining range pollution prevention systems. Range BMPs shall be reviewed annually for effectiveness and potential improvements in their design, monitoring, maintenance, and operational procedures in an effort to continually improve them. Each year the annual report shall detail the range-specific activities including, but not limited to, the number of rounds fired, number of shooters and their organization, and the number of days the range was in use. The annual report will also detail active SAR groundwater well and lysimeter results, as well as any range maintenance/management activities that took place that training year and the result of such activities, i.e. lbs of brass and projectiles recovered and recycled, etc. The Massachusetts National Guard shall provide regular and unrestricted access for the EMC to all its data and information, and will provide immediate access to environmental samples from the range, including range management and monitoring systems and any other applicable activities operating on the ranges.

19.7. Range plans and BMPs for training areas shall be reviewed and/or updated at least every three years. Management plans for new and upgraded ranges shall be in place prior to construction or utilization of the range. Range plans, at a minimum, will address long-term sustainable use, hydrology and hydrogeology, physical design, operation, management procedures, record keeping, pollution prevention, maintenance, monitoring, and applicable

technologies to ensure sustainable range management. Range plans shall be integrated with other training area planning processes and resources.

19.8. The Massachusetts National Guard shall establish procedures for range maintenance and where applicable, maintenance and/or clearance operations to permit the sustainable, compatible, and safe use of operational ranges for their intended purpose within the Upper Cape Water Supply Reserve. In determining the frequency and degree of range maintenance and clearance operations, the Massachusetts National Guard shall consider, at a minimum, the environmental impact and safety hazards, each range's intended use, lease requirements, and the quantities and types of munitions or simulated munitions expended on that range.

The specific conditions in the EMC approval for the operation of Tango Range, which may be updated as needed, included the following:

1. All firing at Tango Range will be in accordance with the Environmental Performance Standards, the Tango Range Plan, this approval letter, and all other applicable laws, regulations, and approvals.
2. A report shall be prepared and submitted by September 15, 2007 evaluating the design, materials, and installation methods of the lysimeters on Tango Range.
3. A plan to utilize real time soil sampling devices on the range (e.g. XRF) shall be prepared and submitted by September 15, 2007 proposing a procedure and schedule to test surface and shallow soils on Tango Range.
4. Starting on or before September 30, 2007 and then quarterly thereafter for at least the 18 months of this approval, an e-mail update shall be sent to the EMC staff summarizing the use of the range during the previous three-month period. The e-mail shall include a summary of any problems encountered or other issues emerging during the applicable time period.
5. Should tracers be proposed for use on Tango Range, a night fire test shall be conducted to better identify any potential problems associated with ricochets off target frames or other surfaces.
6. Range Control packets for Tango Range will be updated as needed to address any conditions associated with this approval, the Range Plan, the July 11, 2007 Environmental Performance Standard changes, or other relevant changes. Packets shall include information that observations and inspections of the range, including by the EMC's Environmental Officer, will be an ongoing and integral part of the range operation process. Range Control briefings and Range Safety Officer briefings shall also include information of the monitoring oversight requirements.
7. By the fall of 2008, the contents of the bullet trap, and if and where applicable, relevant toe berm boxes, shall be opened and the projectiles collected. A mass balance of expended rounds expected vs. rounds collected shall be conducted and a report submitted by November 15, 2008.
8. The Annual State of the Reservation Report shall have a section dedicated to details of the Tango Range operation, maintenance, monitoring, inspections, and relevant issues encountered during the applicable period. Efforts shall be made to include in the Report any


timely and relevant Tango Range information from October and November up to the point of finalizing the Report in December.

9. In addition to the Annual State of the Reservation Report, the MANG will provide the public with an informational meeting in the Fall of 2007 to provide an update on the initial operation of Tango Range. The community shall also be informed through periodic updates at the EMC's Community Advisory Council meetings, Science Advisory Council meetings, and on the MANG's Environmental & Readiness Center web site ([www.eandrc.org](http://www.eandrc.org).)
10. The *T Range Best Management Practices: Operations, Maintenance, and Monitoring Plan* shall be modified to require re-sampling and validation of results if the pore water and/or groundwater analysis meets or exceeds one third of the Level 2 concentrations listed in tables 6-2 and 6-3. Re-sampling and validation for lead in soil shall occur at one half of the levels listed in Table 6-1.
11. The review and updating of the Tango Range Plan/Periodic Review noted in Section 7.3 of the Tango Range Plan may be required or initiated by any member of the Small Arms Range Working Group.
12. The MANG will provide a monthly schedule of anticipated Tango Range use (training or maintenance), and at least 24 hour notice of unanticipated use.

### III. FINDINGS

The EMC has reviewed the mitigation conditions included in the MEPA Certificate dated November 9, 2006 for the NPC associated with the Tango Range. As discussed above, the use of the Tango Range as proposed by the MANG is subject to the requirements of the EMC Conditional Approval dated June 23, 2007 and the Environmental Performance Standard, as amended on July 11, 2007. Accordingly, the EMC hereby finds pursuant to M.G.L. C. 30, S. 61 that with the implementation of the conditions referenced above, all practicable and feasible measures will have been taken to avoid or minimize environmental damage from the project.

Additional Section 61 findings will be part of the Massachusetts Army National Guard's Supplemental Environmental Impact Report. Any subsequent small arms range approvals issued under the range review process established in the new Environmental Performance Standard, including any new EMC approval for the Tango Range following the expiration of its Conditional Approval on December 31, 2008, will also be the subject of Section 61 findings by the EMC.

  
Mark J. Begley  
Executive Director,  
Environmental Management Commission

October 11, 2007  
Date